

UNC Geotech

UNC Geotech
2597 B 3/4 Road
P.O. Box 14000
Grand Junction, Colorado 81502-5504
303/242-8621

May 31, 1989

Mr. Dee Williamson
U. S. Department of Energy
Grand Junction Projects Office
P.O. Box 2567
Grand Junction, Colorado 81502

SUBJECT: SUBMITTAL OF DRAFT MONTICELLO VICINITY PROPERTIES APPLICABLE OR
RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs) ANALYSIS

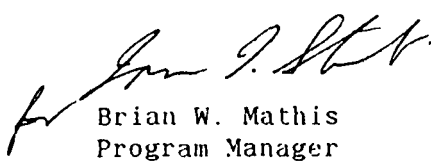
Dear Mr. Williamson:

Attached for your May 31, 1989, transmittal to EPA and the State of Utah is the draft Monticello Vicinity Properties Applicable or Relevant and Appropriate Requirements (ARARs) analysis, as requested by the EPA Region VIII. This analysis supplements the Monticello Vicinity Properties Equivalency of Documentation previously submitted, and included ARARs for properties completed and properties to be remediated in the future.

Review comments from Richard Nace, Weston OTS, have been addressed in this document. No comments were received from DOE-ID.

If you have any questions, please call me at extension 6355 or call Tracy Plessinger at 6197.

Sincerely,


Brian W. Mathis
Program Manager

HB:mt

Attachment

19019

bcc: HA Barbe
TJ Carlson
TB Plessinger
JM Sewell
II Stewart
VF Tunc
JW Uhler
CA Files

**MONTICELLO REMEDIAL ACTION PROJECT
ANALYSIS OF
FEDERAL AND STATE APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)
FOR THE MONTICELLO VICINITY PROPERTIES, MONTICELLO, UTAH**

1.0 INTRODUCTION

The original Monticello mill started operations in 1942 and was financed by the United States Government through its agent, the Defense Plant Corporation, to provide an additional source of vanadium needed during World War II. The Vanadium Corporation of America operated the mill for the Government until 1944, and privately under a lease from the Government from 1944 to 1946. The U.S. Atomic Energy Commission (AEC) reactivated the mill in 1948 and engaged The Galigher Company to rebuild it. The mill was operated for the AEC from 1949 to 1956 by The Galigher Company, and from 1956 through 1959 by the National Lead Company, under cost-type contracts to produce both uranium and vanadium. During the years following the AEC takeover of the mill, uranium was the primary product.

Mill operations were terminated on January 1, 1960, and the plant was dismantled and excessed by the end of 1964. The mill-tailings piles were stabilized with 6 to 18 inches of cover during the period 1961 to 1962. It is estimated that during its years of operation, the mill processed between 900,000 and 1.6 million tons of ore.

Tailings particles were carried by wind and water and contaminated areas away from the millsite. Also, areas were contaminated where tailings had been deposited by human activities.

Mill tailings from the Monticello Millsite were used in the City of Monticello for construction purposes. These tailings were used as fill for open lands; as sub-base for driveways, sidewalks, and concrete slabs; as backfill against basement foundations; and as sand mix in concrete, plaster, and mortar. The total tonnage of uranium mill tailings removed from the millsite for construction purposes was not documented.

Concern regarding the potential health hazards that result from exposure to radiation emanating from uranium mill tailings and from contaminated structures in the vicinity of such sites ('vicinity properties' or 'offsite properties') prompted the U.S. Congress to enact legislation which authorized the Department of Energy (DOE) to undertake remedial action to eliminate or minimize this environmental hazard. The Uranium Mill Tailings Radiation Control Act of 1978 (Public Law 95-604) authorized remedial action at inactive uranium mill-tailings sites owned by private industry. Standards for implementing that legislation were established by the Environmental Protection Agency (EPA), and set forth in the Code of Federal Regulation, Volume 40, Part 192. The Uranium Mill Tailings Remedial Action (UMTRA) Program was created to execute the remedial actions required by the law. Because the Monticello Millsite is owned by the Federal Government, it was accepted instead into the Surplus Facilities Management Program (SFMP) in late 1980, with the intent to implement remedial action at the site. Subsequently, the Monticello Vicinity Properties (MVP) Project was initiated to reduce the public's exposure to radiation by either removing contaminated material from properties that

contain tailings from the Monticello mill or by modifying existing structures to isolate radiation sources from inhabitants. Although neither the millsite nor the vicinity properties were regulated by Public Law 95-604 jurisdictionally as an "applicable requirement," it was determined that every effort would be made to bring the sites into compliance with the EPA standards that were "relevant and appropriate." Those final standards (40 CFR Part 192) require cleanup of contaminated sites and properties such that specific conditions are met.

The DOE SFMP office also adopted, as guidelines, the technical requirements of the EPA Standards for Remedial Action at Inactive Uranium Processing Sites (40 CFR Part 192), Nuclear Regulatory Commission (NRC) radiological protection standards (U.S. NRC, 1982), and U.S. Department of Energy Guidelines for Residual Radioactive Material at Formerly Utilized Sites Remedial Action Program and Remote Surplus Facilities Management Program Sites (Revision 2, March 1987) including "Hot Spot" criteria.

DOE established an official list of Vicinity Properties designated for remedial action under its SFMP on the basis of radiologic surveys. Radiologic surveys have been conducted throughout the town of Monticello to identify the existence, nature, and magnitude of radiation exposure from mill tailings originating from the Monticello Millsite.

1. The 1971 and 1980 EPA-subsidized mobile scanning surveys (U.S. EPA, 1972; Bendix Field Engineering Corp., 1982) were performed by DOE contractors. These surveys identified 98 anomalous properties.
2. In 1982, Bendix Field Engineering Corporation, under contract to DOE, investigated a total of 114 properties, including the 98 properties identified above plus an additional 16 properties which were surveyed at the request of landowners.
3. Oak Ridge National Laboratory (ORNL) performed a survey in 1983 which added 36 more properties to the investigation.
4. In June 1984, a radiation survey of buildings in Monticello was conducted by EPA Region VIII personnel together with personnel from the State of Utah and DOE. As a result of the surveys, 10 buildings were identified for further investigation.

Through its Grand Junction Projects Office (GJPO), DOE began cleanup of properties that exceeded levels for inclusion into the program in the summer of 1984 in accordance with EPA standards for cleanup and stabilization of inactive uranium mill tailings sites (40 CFR Part 192). DOE has accepted responsibility for properties contaminated with tailings from the Monticello Millsite. DOE has also conducted cleanup action which was funded by EPA in 1984 at two properties not included in DOE's SFMP.

The cleanup activity proposed or implemented at each Vicinity Property consists of decontamination, interim removal of identified residual radioactive material to the inactive millsite, and restoration with clean materials. Decisions regarding the method and location of final disposal of contaminated materials at the millsite including the Vicinity Property materials are proceeding in accordance with the National Environmental Policy Act (NEPA) and CERCLA, as amended.

In October 1984, the contaminated Vicinity Properties were proposed for inclusion (as "Monticello Radioactively Contaminated Properties") on the National Priorities List (NPL) pursuant to CERCLA and were formally included on the NPL on June 10, 1986. As a result, cleanup activities at the Vicinity Properties must satisfy requirements of CERCLA and the Superfund Amendments and Reauthorization Act (SARA) of 1986.

Of the 160 anomalous properties identified in the forementioned surveys 91 Vicinity Properties were identified by DOE as response action candidates. DOE has completed 52 remedial actions as of March 1989. An additional 13 properties are scheduled for remedial action in FY 1989.

EPA, the state, and DOE have agreed to conduct the response action(s) at the site pursuant to the Federal Facilities Agreement (FFA) of December 1988 under Section 120 of CERCLA, as amended by SARA.

It should be noted that Section 120 Federal Facilities, and Section 121 Cleanup Standards of SARA were only applicable to the Monticello Vicinity Properties (MVP) following the authorization of the Act by Congress on October 17, 1986. Further, Executive Order 12580 outlining the responsibilities of DOE with regard to CERCLA was signed on January 23, 1987. Therefore previous work should not be compared to current legislation or guidelines that had not been proposed or adopted at the time when the MVP remedial actions were completed. The spirit of the FFA and this MVP ARARs Analysis is to ascertain if the actions performed were reasonable at the time and to provide reasonable and logical justification for continuing MVP remedial action of current and future inclusions in the same manner.

2.0 BACKGROUND FOR APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS)

Section 121 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, requires that the following be considered when selecting a remedial action at a CERCLA/SARA site:

"Such remedial actions shall be relevant and appropriate under circumstances presented by the release or threatened release of such substance, pollutant, or contaminant...with respect to any hazardous substance, pollutant or contaminant that will remain on site, if--

"(i) any standard, requirement, criteria, or limitation under any federal environmental law, including but not limited to, the Toxic Substances Control Act, the Safe Drinking Water Act, the Clean Air Act, the Clean Water Act, the Marine Protection, Research, and Sanctuaries Act, or the Solid Waste Disposal Act; or

"(ii) any promulgated standard, requirement, criteria, or limitation under a state environmental or facility siting law that is more stringent than any federal standard, requirement, criteria, or limitation, including each such state standard, requirement, criteria, or

limitation contained in a program approved, authorized or delegated by the Administrator under a statute cited in subparagraph (A), and that has been identified to the President by the state in a timely manner,

"is legally applicable to the hazardous substance or pollutant or contaminant concerned or is relevant and appropriate under the circumstances of the release or threatened release of such hazardous substance or pollutant or contaminant, the remedial action selected under section 104 or secured under section 106 shall require, at the completion of the remedial action, a level or standard of control for such hazardous substance or pollutant or contaminant which at least attains such legally applicable or relevant and appropriate standard, requirement, criteria, or limitation." (Section 121 [d][2][A])

Procedures for identifying and evaluating federal ARARs are listed in the U.S. Environmental Protection Agency's draft guidance, *CERCLA Compliance with Other Laws Manual*, August 8, 1988, Office of Emergency and Remedial Response, Washington, D.C. 20460, OSWER Directive 9234.1-01. Guidance for identifying and analyzing ARARs is also provided at 40 CFR Part 300, specifically the proposed rule of December 21, 1988, FR 51394.

Environmental Protection Agency (EPA) guidance defines categories of ARARs. A requirement may be either "applicable" or "relevant and appropriate," but not both. An "applicable" requirement is any cleanup standard, standard of control, or other substantive environmental protection standard promulgated under federal or state law that specifically addresses a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site. For a requirement to be "applicable," all of the jurisdictional prerequisites of that requirement must be satisfied with respect to the remedial action or site circumstances. A "relevant and appropriate" requirement is any promulgated federal or state environmental law that may not be "applicable" to a hazardous substance, remedial action, or location at a CERCLA site, but which nonetheless addresses site specific contaminants or circumstances sufficiently similar to those encountered at a CERCLA site so that its use is well suited to the particular site. The relevance and appropriateness of a requirement can be judged by comparing a number of factors--including the characteristics of the remedial action, the hazardous substances in question, and the physical circumstances of the site--with those addressed in the requirement. All or part of a law or act may be relevant and appropriate at a site.

Requirements, regulations, acts, and other provisions determined to be ARARs must be complied with unless they meet the waiver requirements under CERCLA/SARA Section 121(d)(4). The waiver requirements are listed below:

- Selection of Interim Remedy. The remedial action selected is only part of a total remedial action that will attain the ARAR level or standard of control when completed.
- Greater Risk to Human Health and Environment. Compliance with the ARAR at the site will result in greater risk to human health and the environment than the alternative selected.

- Technical Impracticability. Compliance with the requirement is technically impracticable from an engineering design perspective.
- Equivalent Standard of Performance Attained. The remedial action selected will attain a standard of performance that is equal to that required by the ARAR through use of another method or approach.
- Inconsistent Application of State Requirements. The state has not consistently applied (or demonstrated an intention to apply consistently) the ARAR in similar circumstances at other remedial actions.
- Fund Balancing. This waiver is for Superfund-financed cleanups only.

There are three types of ARARs: chemical-specific, location-specific, and action-specific. Chemical-specific ARARs set health- or risk-based concentration limits for particular hazardous substances or contaminants in air, soils, water, etc. Location-specific ARARs establish additional requirements on the basis of unique characteristics of a site that could be affected as a result of remedial action. Action-specific ARARs are technology-based restrictions which are determined by the remedial action alternatives considered.

If no ARAR exists for a contaminant, chemical, or for the circumstances surrounding the release of a hazardous chemical, or if existing ARARs do not ensure protection of human health and the environment, then federal and state criteria, advisories, guidance, and proposed rules may be considered. These are referred to as TBCs--to be considered. Although TBCs cannot be ARARs, they often will be considered along with ARARs in the site risk assessment and will be used in determining the necessary level of cleanup for protection of health or the environment.

3.0 ARARS IDENTIFICATION METHODOLOGY FOR THE MONTICELLO VICINITY PROPERTIES

ARARs can be identified only on a site-specific basis. The suitability of an ARAR depends on site characteristics, specific elements, chemicals at the site, and particular actions anticipated as remedies. The remedial action is an interim remedy consisting of removing material from the properties and consolidating the tailings at the Monticello Millsite prior to final disposal. Because this remedy has been selected for all Monticello Vicinity Properties, this ARARs assessment considers the characteristics of the Monticello Vicinity Properties as one cleanup effort. The characteristics of final disposal sites are not discussed in this analysis. The final disposal sites and associated ARARs are found in the Revised Draft Feasibility Study for the Monticello, Utah, Uranium Mill Tailings Site, Volume II, (U.S. Department of Energy, April 1989).

The final ARARs determination is made by the EPA in consultation with the State of Utah. It is understood that the identification of ARARs is an iterative process. Therefore, additional requirements may be identified and requirements may be deleted as the list of potential ARARs is further refined by the state, EPA, and the DOE.

The procedures for identification and analysis of the federal and state ARARs are found in the five steps outlined in the EPA's *Compliance with Other laws Manual*; OSWER Directive 9234.1-0:

1. Identification of potential ARARs.
2. Determination of applicability of potential ARARs.
3. Determination of relevancy and appropriateness of potential ARARs.
4. Determination of protectiveness, criteria, guidance, advisories, and proposed standards from the risk assessment which are to be considered (TBCs).
5. Determination of circumstances which may be present that would justify a waiver of otherwise applicable or relevant and appropriate requirements.

4.0 FEDERAL ARARS

In Table 1 are summarized the federal requirements analyzed for potential ARARs for the Monticello Vicinity Properties Project. This analysis addresses past, present, and future inclusion vicinity properties.

As previously mentioned an ARAR can either be applicable or relevant and appropriate but not both. The standards and requirements at 40 CFR Part 192 are relevant and appropriate to remedial actions completed in the past on the Monticello Vicinity Properties. For the requirements to be applicable the site must meet the jurisdictional requirements of a law or act.

4.1 Chemical-Specific Requirements

The principal contaminants/elements of concern during remedial action at the Monticello Vicinity Properties are radioactive and nonradioactive substances associated with uranium and vanadium mill tailings. Other concerns include direct-gamma and alpha radiation from radon and radium-226. The contaminants of concern can have either carcinogenic or toxic effects in humans. The contaminant exposure pathways considered relevant to the Monticello Vicinity Properties site are direct exposure, inhalation, and ingestion. The potential chemical-specific ARARs are evaluated in the following paragraphs.

Safe Drinking Water Act (SDWA)

The regulations for implementing the SDWA, as amended, contain criteria and procedures to assure a supply of drinking water which dependably complies with maximum contaminant levels. They include quality control and testing procedures to insure compliance with these levels and to insure proper operation and maintenance of the public potable water supply system. The regulations also specify the minimum quality of water that may be taken into the system and provide siting requirements for new facilities for public water systems.

MONTICELLO REMEDIAL ACTION PROJECT

MONTICELLO VICINITY PROPERTIES

Table 1. Analysis of Potentially Applicable or Relevant and Appropriate Requirements (ARARs) Federal Standards, Criteria, and Limitations

Standard, Requirement, Criteria, or Limitation	Citation	Description	Status	Comment
Safe Drinking Water Act	42 USC 300g			
National Primary Drinking Water Standards	40 CFR Part 141	Establishes health-based standards for public water systems (maximum containment levels).	Neither applicable nor relevant and appropriate.	The majority of properties are within town limits and are connected to a public water supply system. No water supply systems are affected by remediation.
National Secondary Drinking Water Standards	30 CFR Part 143	Establishes welfare-based standards for public water systems (secondary maximum containment levels).	Neither applicable nor relevant and appropriate.	Public water supply systems are not affected by remediation.
Clean Water Act	33 USC 1251-1376			
Water Quality Criteria	40 CFR Part 131 Quality Criteria for Water, 1986	Sets criteria for states to set water quality standards based on toxicity to aquatic organisms and human health.	Neither applicable nor relevant and appropriate.	No evidence exists for contamination of surface water from Monticello Vicinity Properties.
Clean Air Act	42 USC 7401-7462			
National Primary and Secondary Ambient Air Quality Standards	40 CFR Part 50	Establishes standards for ambient air quality to protect public health and welfare (includes standards for particulate matter and lead).	Applicable through the State of Utah Standards.	Federal standards are applicable, but are implemented through the air program of the State of Utah.
Resource Conservation and Recovery Act (RCRA)	42 U.S.C. 6901 40 CFR Parts 260-280	RCRA requirements for treatment, storage, or disposal of hazardous waste apply to a Superfund site if the site contains RCRA listed or characteristic hazardous waste that was treated or disposed of after the effective date of the RCRA regulations, or if the CERCLA activity at the site involves treatment, storage or disposal of RCRA hazardous wastes.	Neither applicable nor relevant and appropriate	Characterization of the Monticello Vicinity Properties shows that no RCRA listed or characteristic hazardous waste was treated or disposed of at the site and no treatment, storage, or disposal of a RCRA hazardous waste is expected to take place.

MONTICELLO REMEDIAL ACTION PROJECT

MONTICELLO VICINITY PROPERTIES

Table 1 (continued). Analysis of Potentially Applicable or Relevant and Appropriate Requirements (ARARs) Federal Standards, Criteria, and Limitations

Standard, Requirement, Criteria, or Limitation	Citation	Description	Status	Comment
Uranium Mill Tailings Radiation Control Act	42 USC 2022, 42 USC 7901-7942 40 CFR Part 192	Establishes health-based standards for control of residual radioactive materials from inactive uranium processing sites and health-based standards for cleanup of lands and buildings having radioactive materials from inactive uranium processing sites. Also establishes supplemental standards for performing remedial actions that come as close to meeting the otherwise applicable standard as is reasonable under the circumstances.	Relevant and appropriate as an action-specific and chemical specific ARAR	Although the standards apply only to certain specifically designated sites where uranium was processed, they are relevant and appropriate because uranium, vanadium, and radium were processed and it is the radium gross alpha and metals content of uranium processing wastes that are regulated by these standards. (Standards attached as Table 2.)
Occupational Safety and Health Act	29 USC 651-678 29 CFR 1910.96 29 CFR 1926.58	Regulates worker health and safety.	Applicable as an action-specific and chemical-specific ARAR.	Under 40 CFR 300.38, requirements of this Act apply to all response activities under the NCP. These requirements incorporate the radiation exposure limits of 10 CFR Part 20. The asbestos health standards are also addressed by this Act.
National Historic Preservation Act	16 USC 470 40 CFR 6.301(b)	Requires Federal agencies to take into account the effect of any Federally assisted undertaking or licensing on a structure or object that is included on or eligible for the National Register of Historic Places.	Neither applicable nor relevant and appropriate.	Applies to any district, site, building, structure, or object listed on or eligible for the National Register. (See Appendix A).

MONTICELLO REMEDIAL ACTION PROJECT

MONTICELLO VICINITY PROPERTIES

Table 1 (continued). Analysis of Potentially Applicable or Relevant and Appropriate Requirements (ARARs) Federal Standards, Criteria, and Limitations

Standard, Requirement, Criteria, or Limitation	Citation	Description	Status	Comment
Archeological and Historic Preservation Act	16 USC 469 40 CFR 6.301(c)	Establishes procedures to provide for preservation of historical and archeological data which might be destroyed through alteration of terrain as a result of a Federal construction project or a Federally licensed activity or program.	Neither applicable nor relevant and appropriate.	Applies if the disposal alternative would affect historical or archeological sites. (See Appendix A).
Endangered Species Act	16 USC 1531-1543 50 CFR Parts 17, 402 40 CFR 6.302 (h)	Requires that Federal agencies ensure that any action authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify critical habitat.	Neither applicable nor relevant and appropriate	Threatened or endangered species and critical habitat are not present on vicinity properties.

The provisions of the SDWA at 40 CFR Part 141 and 143 were not considered in this analysis as potential ARARs for the Monticello Vicinity Properties site. The drinking water standards are not ARARs for two primary reasons: (1) public water systems would not be affected by the proposed remedial action; and (2) no shallow ground-water wells exist on the Vicinity Properties.

Federal Water Pollution Control Act, as Amended by the Clean Water Act of 1977 (CWA)

Water Quality Criteria

The water quality criteria of the CWA and the regulations at 40 CFR Part 131 were not considered as potential ARARs because no impacts to surface water from the Monticello Vicinity Properties are indicated.

Clean Air Act

The purposes of this Act are to protect and enhance the quality of the nation's air resources so as to promote public health and welfare and the productive capacity of the nation's population. The Act also finds that the prevention and control of air pollution at its source is the primary responsibility of state and local governments.

National Primary and Secondary Ambient Air Quality Standards (NAAQS)

These standards found at 40 CFR Part 50 establish ambient air quality to protect public health and welfare and include standards for particulate matter. These standards for particulate matter (fugitive dust) were found to be potentially applicable, but because they are implemented through the federally approved air quality program in the State of Utah they are not considered to be federal ARARs.

Resource Conservation and Recovery Act (RCRA)

The provisions for implementing this act are found at 40 CFR Parts 260 through 280. There are two general prerequisites for applicability of RCRA hazardous waste management regulations:

- (1) RCRA requirements for treatment, storage, or disposal of hazardous waste apply to a Superfund site if the site contains RCRA listed or characteristic hazardous waste that was treated or disposed of after the effective date of the RCRA regulations that are under consideration as potential ARARs for the site, or
- (2) if the CERCLA activity at the site constitutes current treatment, storage, or disposal of RCRA hazardous waste.

There is also an exclusion for source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 *et seq.*, at 40 CFR § 261.4(a)(4).

Characterization of the Monticello Millsite and Monticello Vicinity Properties as well as history indicate that no RCRA listed or characteristic hazardous wastes were treated or disposed of at the site. No treatment, storage, or disposal of a RCRA hazardous waste is taking

place or is anticipated to take place. Furthermore, EP Toxicity tests performed on millsite tailings at UMTRA sites indicate that uranium mill tailings similar to those at Monticello are not hazardous wastes as defined by RCRA. Therefore, the requirements of RCRA are neither applicable nor relevant and appropriate for the purposes of this analysis.

Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA)

The regulations promulgated at 40 CFR Part 192 were considered as potential ARARs for the Monticello Vicinity Properties. The UMTRCA regulations are not "applicable" because the site does not meet the statutory or jurisdictional prerequisites (i.e., the site is not one of the 24 inactive uranium mill tailings sites specifically identified in UMTRCA). However, the regulations are relevant and appropriate for the following reasons:

- The regulations were promulgated to control tailings which were dispersed into the environment and pose a threat to human health and the environment. The inactive Monticello uranium mill tailings site is characterized by large above-surface and subsurface uranium process residue tailings piles which pose a danger to the public. Dispersion of contaminants, from the Monticello Millsite, into the environment through air, and human use pathways has occurred onto the Monticello Vicinity Properties.
- The regulations at 40 CFR Part 192.21 and Part 192.22 allows for situations where numerical standards may be inappropriate and allows other standards (Supplemental Standards) to be used for remedial actions. The Supplemental Standards could pertain to the proposed remedial action involving some areas of the Monticello Vicinity Properties cleanup.
- The numeric standards for health and environmental cleanup would be relevant and appropriate for corrective action as chemical-specific ARARs. Health and environmental protection standards are shown in Table 2 along with criteria for applying Supplemental Standards.

Although the standards apply only to certain specifically designated sites where uranium was processed, the standards are relevant and appropriate because uranium and vanadium were processed at the site, and it is the gross alpha, direct gamma radium-226, radium-228, and metals content of uranium processing wastes that are regulated by these standards. UMTRCA would serve as a chemical-specific ARAR.

Occupational Safety and Health Act (OSHA)

The regulations at 29 CFR Part 1900 regulate worker health and safety; the requirements of 40 CFR Part 300 of CERCLA dictate that OSHA standards apply to all response actions carried out under the provisions of the National Contingency Plan. In addition, OSHA requirements incorporate the radiation exposure limits of the Nuclear Regulatory Commission 10 CFR Part 20. This act is applicable for the purposes of all remedial actions and is therefore considered applicable as a federal ARAR.

MONTICELLO REMEDIAL ACTION PROJECT
MONTICELLO VICINITY PROPERTIES PROJECT

Table 2. Health and Environmental Protection Standards
for Uranium Mill Tailings 40 CFR Part 192

Subpart B - Standards for Cleanup of Land and Buildings Contaminated with Residual
Radioactive Materials from Inactive Uranium Processing Sites

192.12 Standards

Remedial actions shall be conducted so as to provide reasonable assurance that, as a result of residual radioactive materials from any designated processing site:

- (a) The concentration of radium-226 in land averaged over any area of 100 square meters shall not exceed the background level by more than -
 - (1) 5 pCi/g, averaged over the first 15 cm of soil below the surface,
and
 - (2) 15 pCi/g, averaged over 15 cm thick layers of soil more than 15 cm below the surface.
- (b) In any occupied or habitable building -
 - (1) The objective of remedial action shall be, and reasonable effort shall be made to achieve, an annual average (or equivalent) radon decay product concentration (including background) shall not exceed 0.03 WL, and
 - (2) The level of gamma radiation shall not exceed the background level by more than 20 microroentgens per hour.

Subpart C - Implementation (condensed)

192.21 Criteria for Applying Supplemental Standards

The implementing agencies may apply standards in lieu of the standards of Subparts A or B if certain circumstances exist, as defined in 192.21.

192.22 Supplemental Standards

"Federal agencies implementing Subparts A and B may in lieu thereof proceed pursuant to this section with respect to generic or individual situations meeting the eligibility requirements of 192.21."

- (a) "...the implementing agencies shall select and perform remedial actions that come as close to meeting the otherwise applicable standards as is reasonable under the circumstances."
- (b) "...remedial actions shall, in addition to satisfying the standards of Subparts A and B, reduce other residual radioactivity to levels that are as low as is reasonably achievable."
- (c) "The implementing agencies may make general determinations concerning remedial actions under this Section that will apply to all locations with specified characteristics, or they may make a determination for a specific location, the Department of Energy shall inform any private owners and occupants of the affected location and solicit their comments. The Department of Energy shall provide any such comments to the other implementing agencies [and] shall also periodically inform the Environmental Protection Agency of both general and individual determination under the provisions of this section."

4.2 Location-Specific Requirements

Location-specific ARARs are site specific and basically set restrictions on remedial action activities at particular alternative disposal sites. Location-specific ARARs can apply to remedial actions evaluated for a disposal site and may be used to restrict or preclude certain activities or remedial actions on the basis of location or characteristics of a site. Location-specific ARARs analyzed for the Monticello Vicinity Properties site are:

National Historic Preservation Act of 1966, as amended

The regulations implementing this act at 40 CFR 6.301(b) require federal agencies to take into account the effect of any federally assisted undertaking or licensing on a structure or object that is included on or is eligible for the National Register of Historic Places. These regulations were taken into account and resulted in the DOE and state position that a Programmatic Memorandum of Agreement is not required to complete the Monticello Vicinity Properties Project, see Appendix A.

Archaeological and Historical Preservation Act of 1979

This act establishes procedures to provide for the preservation of historical and archaeological resources which may be destroyed through alteration of terrain as a result of a federal construction project or a federally licensed activity or program. The regulations implementing the Act apply to any disposal alternative or associated construction activity which would affect historical or archaeological resources. On the basis of the forementioned appendix, the regulations are determined neither to be applicable nor relevant and appropriate.

Endangered Species Act

This act requires that federal agencies ensure that any action authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify critical habitat required for the continued existence of that species. No threatened or endangered species have been found at or near the Monticello Vicinity Properties site. Therefore, this act is neither applicable nor relevant and appropriate.

4.3 Action-Specific Requirements

Action-specific ARARs are performance, design, or other similar requirements that control remedial activities or actions. These requirements are not affected by contaminants present but are driven by particular remedial activities or actions that are selected to accomplish a remedy. The requirements do not determine the remedial action alternative but indicate how a selected alternative must be achieved. The action-specific requirements may specify particular performance levels, actions, or technologies, as well as specific levels (or a methodology for setting specific levels) for discharged or residual contaminants.

The action-specific ARAR pertaining to the Monticello Vicinity Properties site is the:

Uranium Mill Tailings Radiation Control Act of 1978, as amended (UMTRCA)

This act requires that standards be met in order to protect the public health and environment contaminated with residual radioactive materials from inactive processing sites.

These standards are found in Table 2 *Health and Environmental Protection Standards for Uranium Mill Tailings* (40 CFR Part 192).

The standards at 40 CFR Part 192 would be applicable if the Monticello Millsite were a privately owned mill and specifically mentioned in the Uranium Mill Tailings Radiation Control Act of 1978 (PL 95-604). However, the Monticello Millsite is owned by the federal government and therefore does not meet the jurisdictional requirements of the Act. Standards and requirements at 40 CFR Part 192 are relevant and appropriate for past, present, and future vicinity property remediation because:

- Specific goals and objectives of CERCLA were and are being met.
- The use of the standards and requirements at the sites is consistent with the purpose of cleanup.
- The media contaminated or affected by cleanup (i.e. soils, air, and ground water) are the same for UMTRA sites and the MVPs.
- The substances involved at the MVPs are similar to both radiologic and toxic substances found at other UMTRA sites.
- The entities affected (i.e., environmental and public health) are the same as those at other UMTRA sites.
- The mode of remedial action at each MVP is the same as those at other UMTRA sites.
- The circumstances i.e., modes of contamination are the same as those at other UMTRA sites.
- The physical location (i.e., close to towns, water courses, etc.) is similar to that of other UMTRA sites.
- The UMTRA "facilities" are similar to the Monticello Remedial Action Project and MVP, i.e., millsite and contaminated off-site properties.
- The use of the resources (uranium and vanadium) involved with UMTRA is the same as MVP.

Given the nature and character of the contaminants of concern, characteristics of the MVPs, the circumstances surrounding the "release," and the proposed response action, it is concluded, using best

professional judgment, that the Uranium Mill Tailings Radiation Control Act of 1978 (PL 95-604) in its entirety is relevant and appropriate both as an action-specific ARAR and as a chemical-specific ARAR.

4.4 Federal Criteria, Advisories, and Guidance to be Considered

Department of Energy Order 5480.1A (Environmental Protection, Safety and Health Protection Program for DOE Operations)

The purpose of this guidance is to establish standards and requirements for operations of the DOE and DOE contractors with respect to protection of the public and the environment against radiation. The standards have been developed to protect soils, aquifers, and natural resources against avoidable contamination by radioactive materials and to provide criteria for limiting the doses to aquatic organisms. Also to be considered with these orders because of their similarity are 5480.4 Environmental Protection, Safety, and Health Protection Standards.

U.S. Department of Energy Guidelines For Residual Radioactive Material at Formerly Utilized Sites Remedial Action Program And Remote Surplus Facilities Management Program (Revision 2, March 1987)

This document presents radiological protection guidelines for cleanup of residual radioactive material and management of the resulting wastes and residues. It is applicable to sites identified by the Former Utilized Sites Remedial Action Program (FUSRAP) and to remote sites identified by the Surplus Facilities Management Program (SFMP). Covered in this document are basic dose limits, guidelines, authorized limits, and "hot spot" criteria for residual radioactive material and requirements for control of radioactive wastes and residues.

5.0 State of Utah ARARs

The U.S. Department of Energy recognizes the iterative nature of the ARARs identification and analysis process. The State of Utah has proposed potential ARARs for the Monticello Site and has provided DOE with this list. Additional requirements deemed applicable or relevant and appropriate may be identified and/or items may be deleted as the list of "potential" ARARs is further refined by the state, EPA, and the DOE.

Twenty-seven of Utah Proposed Potential ARARs were submitted to the DOE in a document dated March 20, 1989. These ARARs were analyzed by the DOE for either potential applicability or relevancy and appropriateness. This analysis is presented in Table 3.

Of the 27 potential ARARs proposed by Utah (Table 3), only the Utah Occupational Safety and Health Standards, several Bureau of Water Pollution Control Standards, several Utah Air Conservation Rules, and several of the Bureau of Radiation Control Standards are potentially applicable or relevant and appropriate for the purposes of present and future remedial actions on the Monticello Vicinity Properties.

MONTICELLO REMEDIAL ACTION PROJECT

MONTICELLO VICINITY PROPERTIES

TABLE 3. Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements (ARARs)

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
A. Department of Agriculture	1. Pesticide Control-- safe and appropriate use of pesticides	Title 4, Chapter 14, Utah Code Annotated (U.C.A)	R68-07 Utah Administrative Code (U.A.C)	See particularly R68-07-10, U.A.C., regarding storage, transport and disposal and R68-07-11,, U.A.C., regarding other unlawful acts. Neither applicable nor relevant and appropriate.
B. Division of Wildlife Resources, Department of Natural Resources	1. General definitions-- definitions for Wild- life Resources Code, Title 23, Chapter 13, U.C.A	23-13-2. U.C.A.	None	Neither applicable nor relevant and appropriate.
	2. Diversion of water-- diversion endanger- ing protected aquatic wildlife prohibited.	23-15-3, U.C.A	None	Neither applicable nor relevant and appropriate.
	3. Water pollution -- pollution of waters containing protected aquatic wildlife (including specified invertebrates) un- lawful.	23-15-6, U.C.A.	None	Neither applicable nor relevant and appropriate.
C. Division of Oil, Gas and Mining, Department of Natural Resources	1. Mine Safety Provisions -- regarding subsi- dence, fire protection and first aid materials.	Title 40, Chapter 8, U.C.A.	None	Neither applicable nor relevant or appropriate.
	2. Reclamation of lands mined for minerals -- specifies standards for such reclamation.	Title 40, Chapter 8, U.C.A	R13-1M, U.A.C	See particularly R13- 1M-10, U.A.C. Neither applicable nor rele- vant and appropriate. The remedial action is not a mining oper- tion.

MONTICELLO REMEDIAL ACTION PROJECT

MONTICELLO VICINITY PROPERTIES

TABLE 3 (cont). Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
C. Division of Oil, Gas and Mining, (cont.)	3. Mining Standards -- standards governing operation and reclam- ation of strip mines.	Title 40, Chapter 10, U.C.A.	R614, U.A.C.	See particularly 40-10-17, U.C.A. Neither applicable nor relevant and appropriate. The remedial action is not a mining operation.
D. State Engineer, Department of Natural Resources	1. Well drilling standards --standards for drill- ing and abandonment of wells.	73-3-25, U.C.A.	R625-4, U.A.C.	Neither applicable nor relevant and appropriate - No wells are anticipated to be drilled.
	2. Relocation of natural streams--procedures and standards governing rechanneling of stream beds.	73-3-29, U.C.A.	None	Neither applicable nor relevant and appropriate.
	3. Dam Safety -- stan- dards governing integ- rity of water impound- ment structures, in- cluding construction design and removal.	73-5-5 through 7 and 73-5-12, U.C.A.	R625-3, U.A.C.	See particularly R625-3-10 and 11, U.A.C. No dams are anticipated to be constructed by remedial action. Neither applicable nor relevant and appropriate.
E. Division of State History, Department of Community and Economic Development	1. Protection of arch- aeological, anthro- pological and paleon- tological resources.	63-18-18 through 38, U.C.A.	R224, U.A.C.	See particularly Section 63- 18-18, U.C.A., stating legislative interest in preservation of archaeolo- gical, anthropological and paleontological resources, Section 63-18-25, U.C.A., regarding historical resources on state lands, and Section 63-18-37, U.C.A., regarding projects by state agencies. Referring to Documents A, B, and C. This rule is neither applicable nor relevant and appropriate.
F. Industrial Commission	1. Utah Occupational Safety and Health Standards	Title 35, Chapter 9, U.C.A.	R500, U.A.C.	These rules are performance standards identical to federal OSHA regulations. Potentially relevant and appropriate.

MONTICELLO REMEDIAL ACTION PROJECT

MONTICELLO VICINITY PROPERTIES

TABLE 3 (cont). Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
G. Bureau of Solid and Hazardous Waste, Division of Environmental Health, Department of Health	1. Solid Waste	Title 26, Chapter 14, U.C.A.	Not yet codified; copy available from the Bureau of Solid and Hazardous Waste.	These rules govern solid waste landfills. Neither applicable nor relevant and appropriate.
	2. Solid and Hazardous waste	Title 26, Chapter 11, U.C.A.	R450, U.A.C.	These rules are substantively identical to the federal rules promulgated under the Resource Conservation and Recovery Act, with the following exceptions:
		Title 26, Chapter 11, U.C.A.	R450, U.A.C	R450-2-1 (Table 2-III): listings for K048 and K051 (separator sludges) are broader than federal listings;
				R450-2-1 (Table 2-I): listing for F999 (military agent) has no corresponding federal provision;
				R450-9, regarding spill reporting requirements, has no corresponding federal provisions;
		Title 26, Chapter 11, U.C.A.	R450, U.A.C	R450-101, which will be promulgated shortly, lists criteria to be considered in establishing clean-up standards.
				Because no hazardous waste has been identified and uranium mill tailings are a by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 USC 2011 et seq., they are excluded from the RCRA and State Solid and Hazardous Waste laws. The state rules are therefore neither applicable nor relevant and appropriate.

MONTICELLO REMEDIAL ACTION PROJECT

MONTICELLO VICINITY PROPERTIES

TABLE 3 (cont). Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
H. Bureau of Water Pollution Control, Division of Environmental Health, Department of Health	1. Definitions for Water Pollution Rules and General Requirements	Title 26, Chapter 11, U.C.A.	R448-1, U.A.C.	Neither applicable nor relevant and appropriate.
	2. Standards for Quality for Water of the State	Title 26, Chapter 11, U.C.A.	R448-2, U.A.C.	Neither applicable nor relevant and appropriate.
	3. Sewers and wastewater treatment works	Title 26, Chapter 11, U.C.A.	R448-3, U.A.C.	Construction and performance requirements. Parts may be potentially relevant and appropriate.
	4. Large underground wastewater disposal systems	Title 26, Chapter 11, U.C.A.	R448-5, U.A.C.	Governs domestic wastewater systems. Parts may be relevant and appropriate.
	5. Surface disposal of produced water from gas and oil wells	Title 26, Chapter 11, U.C.A.	R448-6, U.A.C.	Neither applicable nor relevant and appropriate.
	6. Underground injection control	Title 26, Chapter 11, U.C.A.	R448-7, U.A.C.	See particularly R448-7-9 specifying technical requirements. Neither applicable nor relevant and appropriate.
	7. Utah pollution discharge elimination system	Title 26, Chapter 11, U.C.A.	R448-8, U.A.C.	See particularly R448-8-7 specifying criteria and standards. Neither applicable nor relevant and appropriate.
	8. Ground water protection	Title 26, Chapter 11, U.C.A.	Not yet assigned	The Bureau of Water Pollution Control, in cooperation with other bureaus in the division, will soon be promulgating ground-water protection standards. There is no corresponding federal program. Neither applicable nor relevant and appropriate.

MONTICELLO REMEDIAL ACTION PROJECT

MONTICELLO VICINITY PROPERTIES

TABLE 3 (cont). Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
I. Bureau of Air Quality, Division of Environ- mental Health, De- partment of Health	1. Utah Air Conservation Rules	Title 26, Chapter 13, U.C.A.	R446-1, U.A.C.	These rules are substantively identical to corresponding federal regulation, with the following exceptions:
		Title 26, Chapter 13, U.C.A.	R446-1, U.A.C.	R446-1-1.25 and R446-1-3.1.8, which require application of best available control tech- nology for any source; R446-1-3.11, which lists criteria to be considered in establishing visibility standards; R446-1-4.1, which sets visible emission standards; R446-1-4.2, which sets standards for sulfur content in fuels; R446-1-4.5, which regulates fugitive dust emissions; and R446-1-5.1, which allows the State to require temporary closure of air pollution sources in the event of an air pollution emergency episode. These rules may be potentially applicable as chemical-specific ARARs, with exception of R446-1-4.2.

MONTICELLO REMEDIAL ACTION PROJECT

MONTICELLO VICINITY PROPERTIES

TABLE 3 (cont). Analysis of State of Utah Proposed Potential Applicable or Relevant and Appropriate Requirements

Department/Division Standard, Regulation, Criteria or Limitation	Subject	Statute	Rule	Remarks
J. Bureau of Drinking Water/Sanitation, Division of En- vironmental Health, Department of Health	1. Utah Public Drinking Water Rules	Title 26, Chapter 12 U.C.A.	R449, U.A.C.	See particularly R449-103 establishing drinking water standards. These standards are identical to federal standards except with respect to sulfate, TDS, and fluoride. Public water supplies are not affected by remedial action. Neither applicable nor relevant and appropriate.
K. Bureau of Radiation Control, Division of Environmental Health Department of Health	1. General provisions -- definition and other provisions applicable to following subjects	26-1-5, U.C.A., and 26-1-27 through 29, U.C.A.	R447-12, U.A.C. R447-19, 21 and 22, U.A.C.	Potentially applicable. Although these provisions relate primarily to licensing requirements, they also contain some substantive standards. See, e.g., R447- 19-500 regarding standards for transportation. Potentially applicable as action-specific ARARs for off-site removal actions.

APPENDIX A



Department of Energy

Grand Junction Area Office
Post Office Box 2567
Grand Junction, Colorado 81502

August 17, 1984

Mr. Wilson Martin
Utah State Division of History
Coordinator of Preservation Development
300 Rio Grande
Salt Lake City, UT 84101

SUBJECT: Planned Remedial Action Activities in Monticello, Utah

Dear Mr. Martin:

As you know, the National Historic Preservation Act of 1966 (36CFR800) established the Advisory Council on Historic Preservation to advise on Federal actions affecting properties included in or eligible for inclusion in the National Register of Historic Places. The purpose of this letter is to facilitate an exchange of information between the State of Utah Historic Preservation Officer and the Department of Energy (DOE) concerning the work activities to be accomplished in Monticello, Utah, under DOE's Surplus Facilities Management Program (SFMP).

The Monticello mill operated from 1941 to 1960 when it was shut down and dismantled. During that time frame, approximately two million tons of ore were processed thru the mill. The DOE stabilized the 78 acre site in 1962 by covering the exposed tailings with approximately one foot of earth removed from a nearby borrow area.

The DOE has documented that uranium mill tailings were removed from the millsite and used throughout Monticello in construction related activities. The primary use has been as fill material for driveways, yards, and around utility lines. The DOE has surveyed over 153 properties in Monticello, and has determined that at least 43 properties exceed the Environmental Protection Agency Standards for Remedial Actions at Inactive Uranium Processing Sites (40CFR Part 192). The investigation has not been completed at this point in time, and we estimate that ultimately as many as 55 properties may be included in the Monticello Vicinity Properties project. (I have attached a listing of the 43 properties currently included in the program.)

It is my understanding that any property in excess of fifty (50) years of age, and meeting other established criteria, may be eligible for inclusion in the National Register of Historic Places. Since the Monticello uranium mill operated from 1941 to 1960, it is highly unlikely that uranium mill tailings could have been used for construction purposes on any property eligible for inclusion in the National Historic Register. However, uranium mill tailings may have been used as backfill or in remodeling a property which may be eligible for inclusion in the National Historic Register. The intent of the SFMP program is to return the property, as nearly as possible, to the condition which existed prior to initiating the remedial action (portions of some affected properties must be brought into compliance with existing building codes prior to reconstruction).

14457 (Crew) 7-2-84

Wilson Martin

-2-

August 17, 1984

The uranium mill tailings removed from these vicinity properties will be transported back to the Monticello Millsite as an interim storage site. This Office is in the process of preparing an Environmental Assessment which will recommend a methodology for disposal of all of the uranium mill tailings in Monticello in a permanent and environmentally acceptable manner. The Environmental Assessment is scheduled to be published in May 1985.

This Office has attempted to identify any structures or buildings in Monticello, Utah, which may be listed on the National Register of Historic Places. We have not identified any at this point in time. We are aware that approximately eight sites in San Juan County are listed, but these are primarily archeological sites remote from the town of Monticello.

Due to the reasons outlined above, this Office does not feel that DOE would be required to enter into a Programmatic Memorandum of Understanding (PMOU) with the Utah State Historic Preservation Office to accomplish the Monticello Vicinity Properties Remedial Action Project. If you are in agreement with the above statement, we would appreciate receiving a letter stating that a PMOU is not required.

If you have any questions on the subject project or wish to discuss the matter further, feel free to call me at 303/242-8621, extension 226.

Sincerely,

Michael K. Tucker
Project Engineer

Attachment (2)

cc w/attachments:

L. Anderson, Utah
R. Wood, ID
C. Clark, ID
C. Miller, Jr., RL
P. Dunigan, RL
G. Turri, NE-24



SCOTT M. MATHESON
GOVERNOR



STATE OF UTAH
DEPARTMENT OF COMMUNITY AND
ECONOMIC DEVELOPMENT

August 27, 1984

Division of
State History
(UTAH STATE HISTORICAL SOCIETY)

MELVIN T. SMITH, DIRECTOR
300 RIO GRANDE
SALT LAKE CITY, UTAH 84101-1182
TELEPHONE 801/533-5755

Michael K. Tucker
Project Engineer
Department of Energy
Grand Junction Area Office
Post Office Box 2567
Grand Junction, Colorado 81502

RE: Department of Energy Testing Uranium Tailings, Monticello, Utah

In Reply Refer to Case No. H297

Dear Mr. Tucker:

The Utah Preservation Office has received for consideration your letter of August 17, 1984, concerning proposed remedial action activities in Monticello, h. After review of the material provided, our office would concur with your determination that there are no listed National Register sites in Monticello, itself, and the project would be considered as no effect by 36 CFR 800 regulations. We would also concur that a programmatic memorandum of agreement, as outlined by 36 CFR 800, is not appropriate for this type of action.

If, in the removing of backfills, or remodeling of a property, there is a discovered effect of a structure that is fifty years of age or older, our office would be happy to assist in consultation. The Secretary of the Interior Guidelines, which we have enclosed, are considered as appropriate standards to follow for actions on older properties.

The above is provided on request as information or assistance. We make no regulatory requirement, since that responsibility rests with the federal agency official. If we can be of any assistance in expediting this matter, please feel free to contact our office. Contact Jim Dykman at 533-7039.

Sincerely,

Wilson G. Martin
Deputy State Historic
Preservation Officer

J:jrc:H297/0778V

Enclosure - Secretary of the Interior Guidelines

Memorandum

DATE: September 7, 1984

SUBJECT: STATE OF UTAH HISTORIC PRESERVATION IN MONTICELLO

TO: John H. Barry, Operational Safety Division, ID, Rm 229

Attached is a letter received from Wilson G. Martin, Deputy State Historic Preservation Officer for the State of Utah, concurring with the DOE position that a Programmatic Memorandum of Agreement is not required to complete the Monticello Vicinity Properties Project in Monticello, Utah. Mr. Martin states that there are no listed National Register sites in Monticello, and the project would be considered as no effect by 36 CFR 800 regulations.

I am of the opinion that this office has complied with the requirements of 36 CFR 800, and plan to take no further action concerning a Programmatic Memorandum of Agreement for the Monticello Vicinity Properties project. If you feel that additional actions are necessary or wish to discuss the project, please give me a call (FTS 322-9226).

Michael K. Tucker
Project Engineer

1 Attachment

cc: w/attachment
C. Clark - ID
R. E. Wood - ID
C. R. Nichols -ID
L. Anderson - State of Utah

Crew
Tucker/evj
9/7/84

Crew
Crew
9/7/84

M-3-A
9-7-84